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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,664	03/30/2004	Yong Qiang Wang	3993968-150413-1	3560

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EXAMINER	
PILKINGTON, JAMES	
ART UNIT	**PAPER NUMBER**
3682	

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/812,664	WANG, YONG QIANG	
	Examiner	Art Unit	
	James Pilkington	3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/30/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: pg 12 line 22 reads "the transmission is switch" should be - - the transmission switch - -.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell, US PGPub 2004/0244524, in view of Osborn, USP 5,277,077.

Re clm 1, Russell discloses a shifter mechanism comprising, in combination:

- A shifter lever (14) movable along a shift path
- A detent plate (34) movable with the shifter lever (14) along the shift path and forming a detent profile defining a plurality of gear positions (Figure 3)
- A pawl (54) movable between a locking position wherein the pawl engages the detent profile to lock the shifter lever in one of the plurality of gear positions and an unlocking position wherein the shifter lever is movable along the shift path between the plurality of gear positions

- An actuator (56) operatively coupled to the pawl (54) to selectively move the pawl (54)

Russell does not disclose that the pawl includes a roller that engages the detent profile.

Osborn teaches a pawl (42) that includes a roller (43) that engages the detent profile for the purpose of providing a shift lever handle assembly having a limited number of parts and constructed of parts that can be actuated more smoothly and with less effort (C2/L30-35).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Russell and provide a pawl that includes a roller that engages the detent profile, as taught by Osborn for the purpose of providing a shift lever handle assembly having a limited number of parts and constructed of parts that can be actuated more smoothly and with less effort.

Re clm 2, Russell discloses that the detent profile includes a plurality of grooves (see Figure 3).

Re clm 3, the actuator (56) is a linear actuator having a pin (90, see Figure 6) extendable along a linear path.

Re clm 4, the linear actuator (56) is a solenoid (see paragraph 0033).

Re clm 5, the pin (90) is in an extended position when said actuator (56) is energized and a retracted position when said actuator is unenergized (see paragraph 0033).

Re clm 6, the pin is in an extended position when the pawl (54) is in the unlocked position and a retracted position when the pawl (54) is in the locking position (see Figures 5 and 6).

Re clm 7, Russell in view of Osborn discloses the roller (Osborn 43) is rotatably secured to a detent lever (Russell 58) and the detent lever is pivotable to move the pawl between the locking position and the unlocking position (see Figures 5 and 6).

Re clms 8 and 9, Russell in view Osborn discloses that the pawl (Osborn 42) moves along an arcuate path between the locking position and the unlocking position {clms 8 and 9} and the actuator (Russell 56) is a linear actuator which is operatively connected to the detent lever to pivot (Russell 58) to pivot the detent lever along the arcuate path {clm 8}.

Claims 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell, US PGPub 2004/0244524, in view of Kataumi, USP 5,445,046.

Re clm 10, Russell discloses a shifter mechanism comprising, in combination:

- A shifter lever (14) movable along a shift path
- A detent plate (34) movable with the shifter lever (14) along the shift path and forming a detent profile defining a plurality of gear positions (Figure 3)
- A pawl (54) movable between a locking position wherein the pawl engages the detent profile to lock the shifter lever in one of the plurality of gear positions and an unlocking position wherein the shifter lever is movable along the shift path between the plurality of gear positions

- A pivotable detent lever (58) carrying the pawl over A linear actuator (56) operatively coupled to the pawl (54) to selectively move the pawl (54)

Russell does not disclose that the pawl moves in an arcuate path.

Kataumi teaches a pawl (30) that is moved by an actuator (spring) in an arcuate path for the purpose of engaging a plurality of detent teeth in a releaseable manner (C1/L36-54).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Russell and provide a pawl (30) that is moved by an actuator in an arcuate path, as taught by Kataumi, for the purpose of engaging a plurality of detent teeth in a releaseable manner.

Re clm 11, Russell discloses that the detent profile includes a plurality of grooves (see Figure 3).

Re clm 12, the actuator (56) is a linear actuator having a pin (90, see Figure 6) extendable along a linear path.

Re clm 13, the linear actuator (56) is a solenoid (see paragraph 0033).

Re clm 14, the pin (90) is in an extended position when said actuator (56) is energized and a retracted position when said actuator is unenergized (see paragraph 0033).

Re clm 15, the pin is in an extended position when the pawl (54) is in the unlocked position and a retracted position when the pawl (54) is in the locking position (see Figures 5 and 6).

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell, US PGPub 2004/0244524, in view of Kataumi '046, and further in view of Osborn, USP 5,277,077.

Re clm 16, Russell in view of Kataumi discloses all of the claimed subject matter above.

Russell in view of Kataumi does not disclose that the pawl includes a roller that engages the detent profile.

Osborn teaches a pawl (42) that includes a roller (43) that engages the detent profile for the purpose of providing a shift lever handle assembly having a limited number of parts and constructed of parts that can be actuated more smoothly and with less effort (C2/L30-35).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Russell in view of Kataumi and provide a pawl that includes a roller that engages the detent profile, as taught by Osborn for the purpose of providing a shift lever handle assembly having a limited number of parts and constructed of parts that can be actuated more smoothly and with less effort.

Re clm 17, Osborn discloses that the roller (43) is rotatably secured to the detent lever (40).

Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell, US PGPub 2004/0244524, in view of Wheeler, USP 6,038,939.

Re clm 10, Russell discloses a shifter mechanism comprising, in combination:

- A shifter lever (14) movable along a shift path
- A detent plate (34) movable with the shifter lever (14) along the shift path and forming a detent profile defining a plurality of gear positions (Figure 3)
- A pawl (54) movable between a locking position wherein the pawl engages the detent profile to lock the shifter lever in one of the plurality of gear positions and an unlocking position wherein the shifter lever is movable along the shift path between the plurality of gear positions
- An actuator (56) operatively coupled to the pawl (54) to selectively move the pawl (54)

Russell does not disclose a spring plate movable with the shifter lever along the shift path and forming a secondary profile; and a spring engaging the secondary detent profile as the shifter moves over the shift path.

Wheeler teaches a spring plate (housing grooves 144) movable with the shifter lever (118) along the shift path and forming a secondary profile (grooves 144); and a spring (160) engaging the secondary detent profile (144) as the shifter moves over the shift path for the purpose of holding the lever subassembly in anyone of the various detent positions (C3/L14-16 (60 and 160 are both springs in alternative embodiments)).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Russell and provide a spring plate movable with the shifter lever along the shift path and forming a secondary profile and a spring engaging the secondary detent profile as the shifter moves over the shift path, as taught

by Wheeler, for the purpose of holding the lever subassembly in anyone of the various detent positions.

Re clm 19, Wheeler discloses that the spring (160) is a leaf spring (like applicants).

Re clm 20, Wheeler discloses that the secondary detent profile includes a plurality of grooves (144).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Pilkington whose telephone number is (571) 272-5052. The examiner can normally be reached on Monday-Friday 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JP
8.21.06

RICHARD RIDLEY
SUPERVISORY PATENT EXAMINER